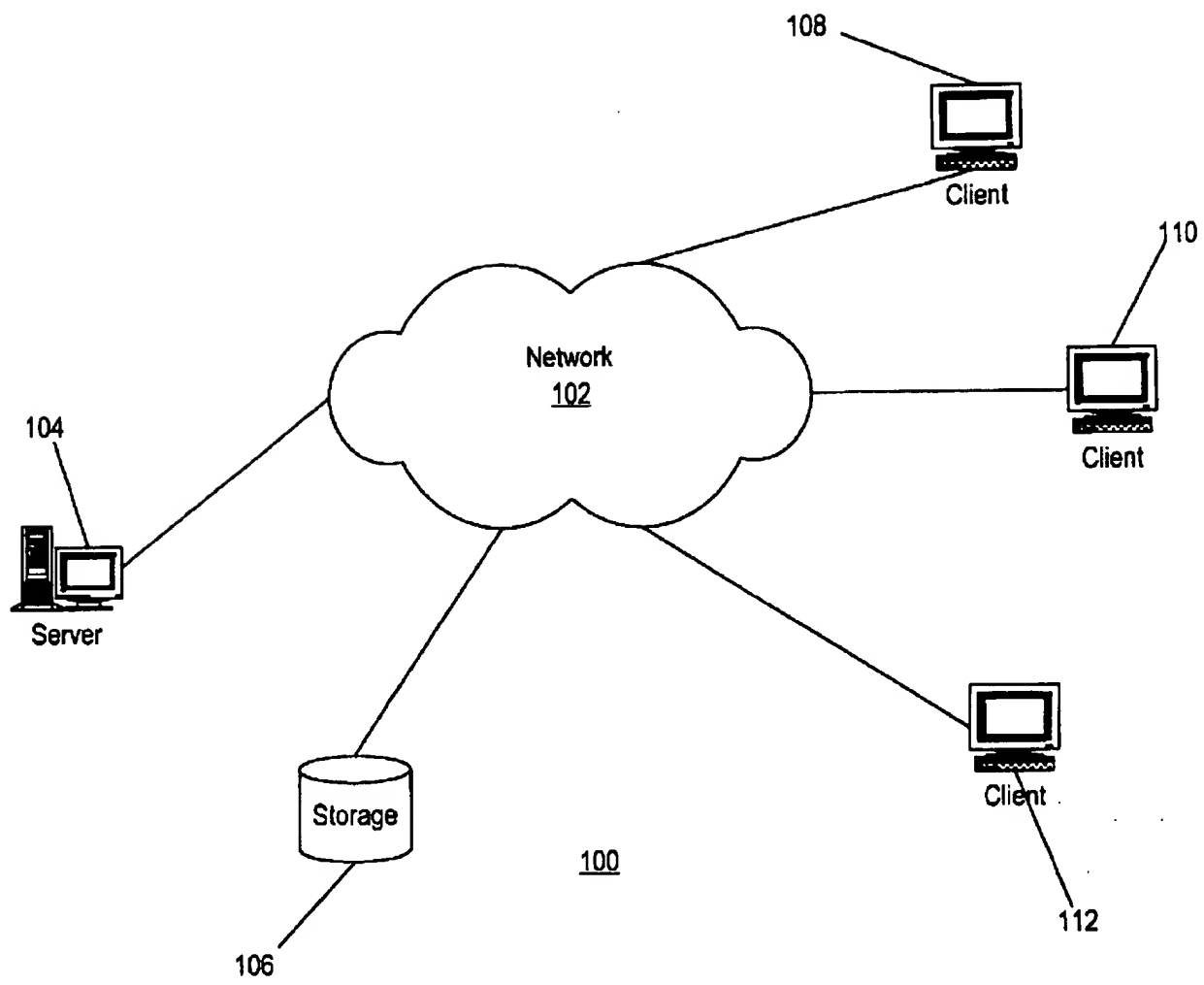


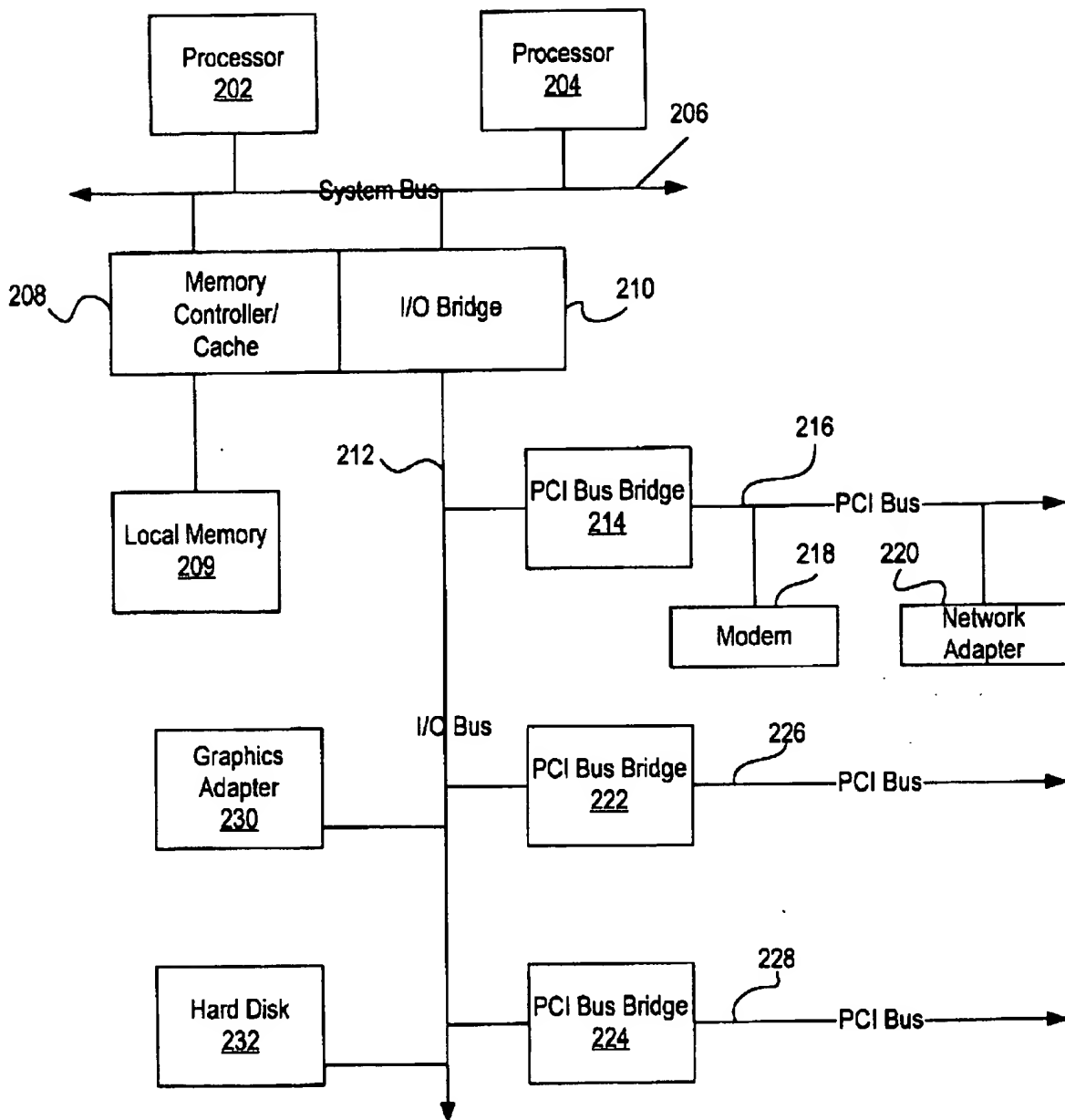
EK690671357US

Figure 1
AUS000057US1



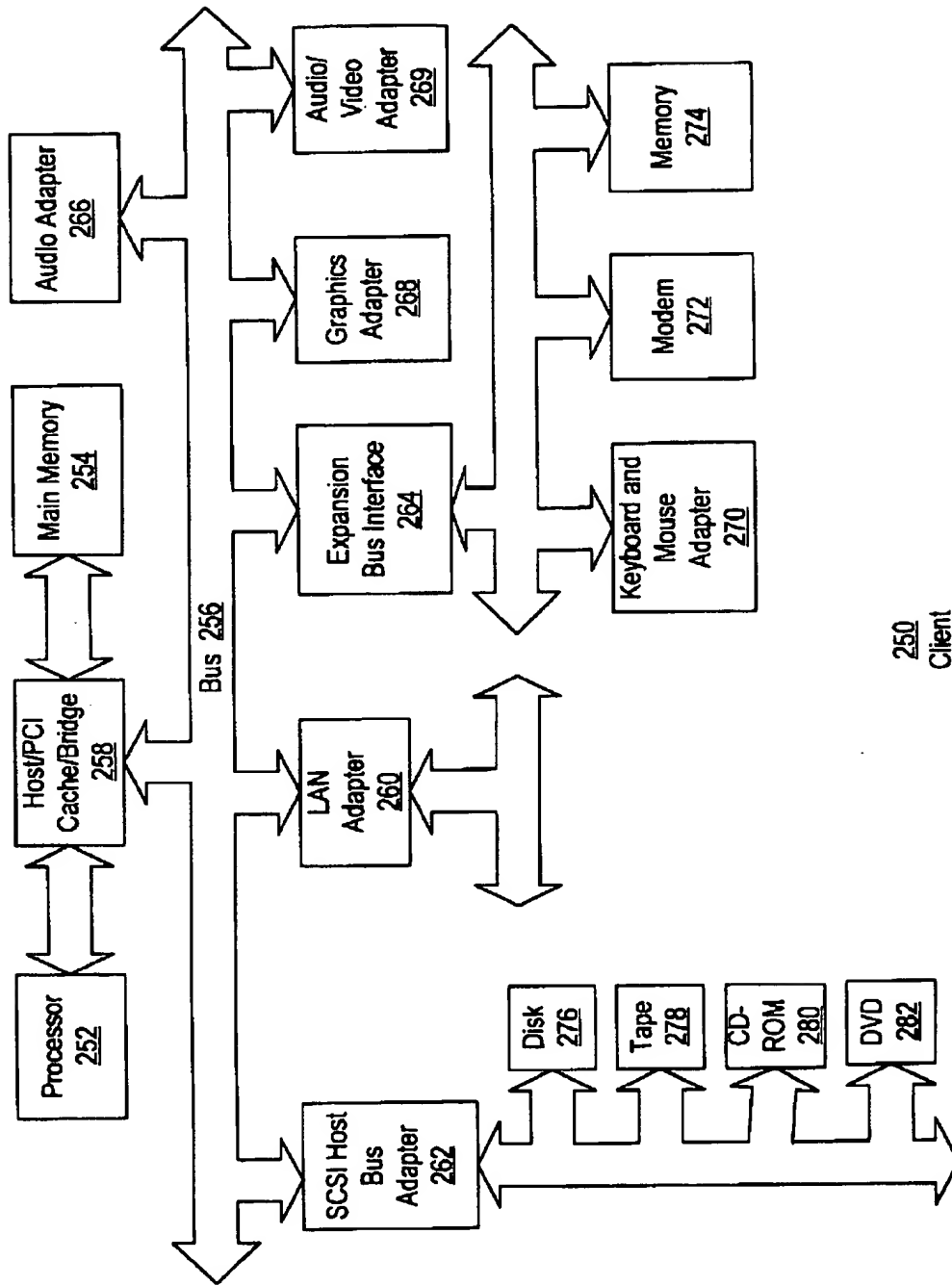
005020-05000000

005020" 05621560



200

Figure 2A
AUS000057US1



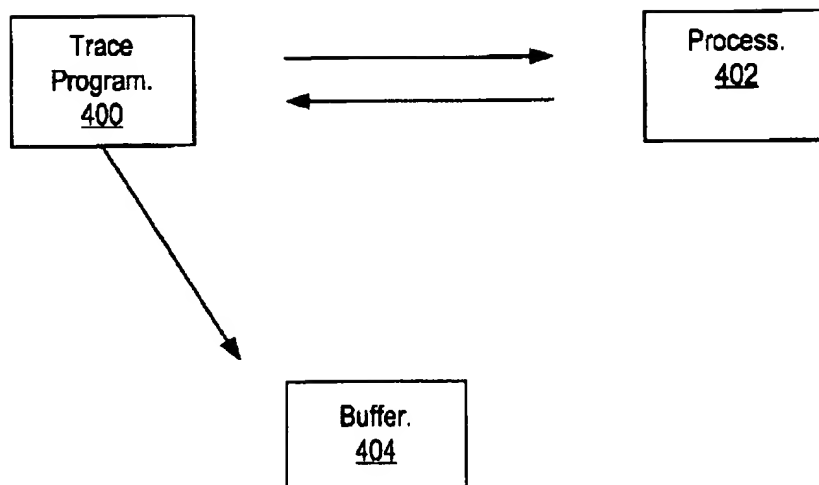
250
Client

Figure 2B

AUS000057US1

Figure 4

AUS000057US1



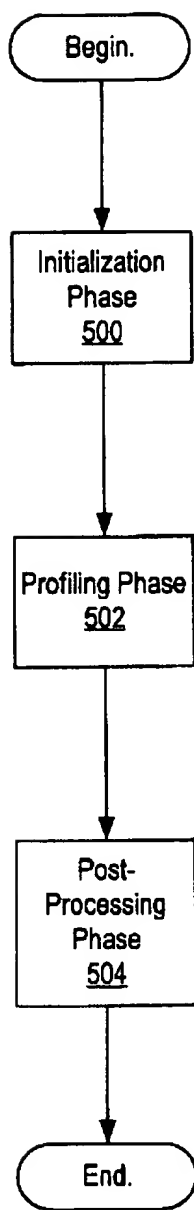
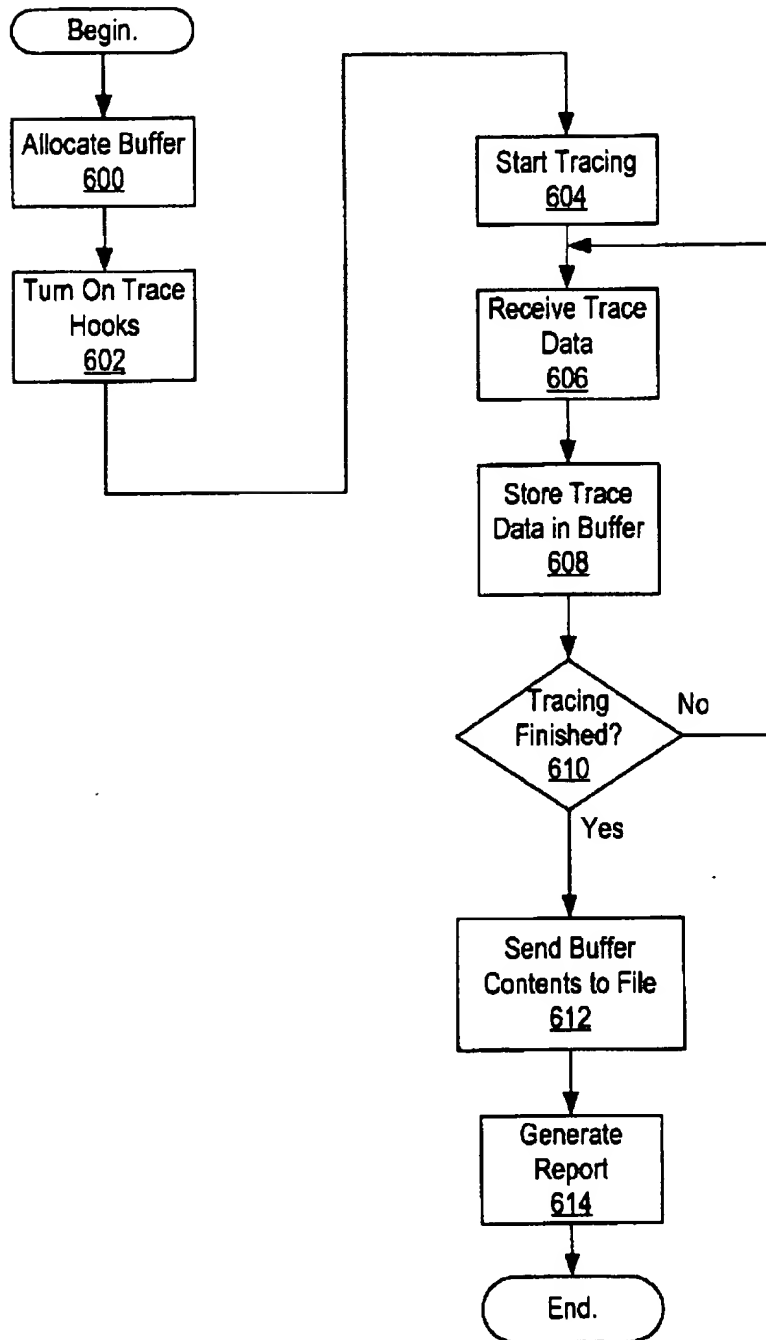


Figure 5
AUS000057US1

Figure 6
AUS000057US1



005020-032F560

Figure 8
AUS000057US1

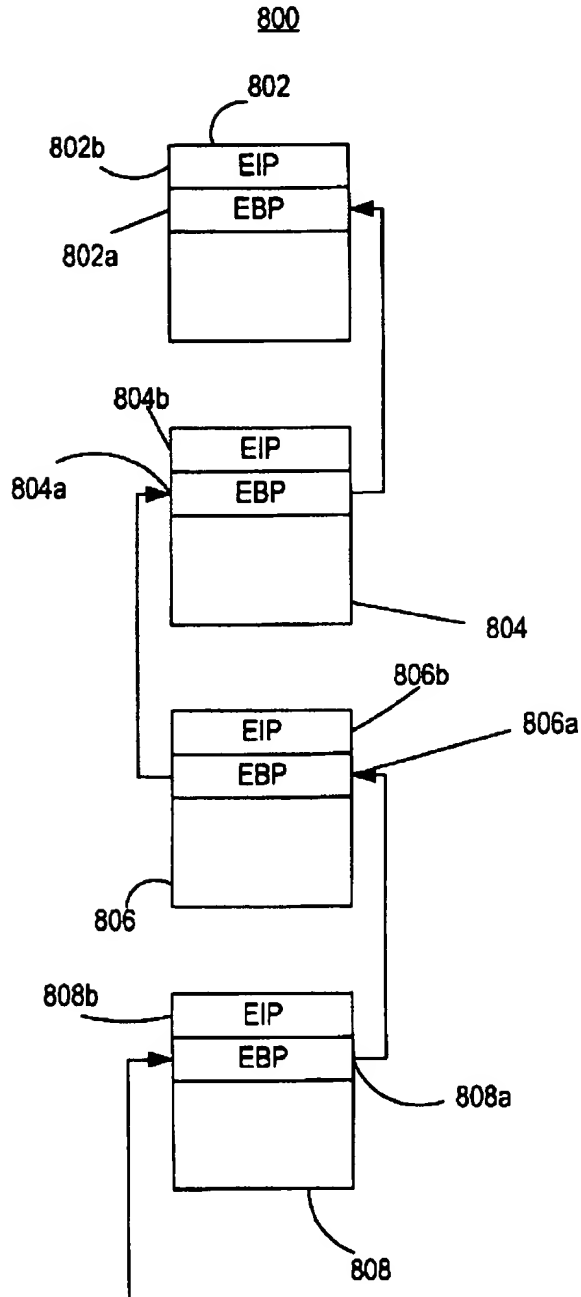
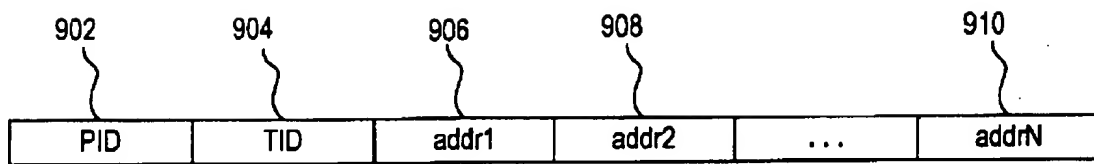


Figure 9

AUS000057US1

900



Timestamp	Event	Call Stack After
0	enter C	Event
1	enter A	C
2	enter B	CA
3	exit from B	CAB
4	enter B	CA
5	enter B	CAB
6	exit from B	CABB
7	exit from B	CAB
8	exit from A	CA
9	enter B	C
10	enter A	CB
11	enter B	CBA
12	enter A	CBAB
13	exit from A	CBABA
14	exit from B	CBA
15	enter X	CBAX
16	exit from X	CBA
17	exit from A	CB
18	exit from B	C
19	exit from C	

Figure 10A

AUS000057US1

Sample	Call Stack @ Sample
1	C
2	CAB
3	CAB
4	CAB
5	C
6	CBA
7	CBABA
8	CBA
9	CBA
10	C

Figure 10B

AUS000057US1

Figure 10C

AUS000057US1



Figure 10D

AUS000057US1

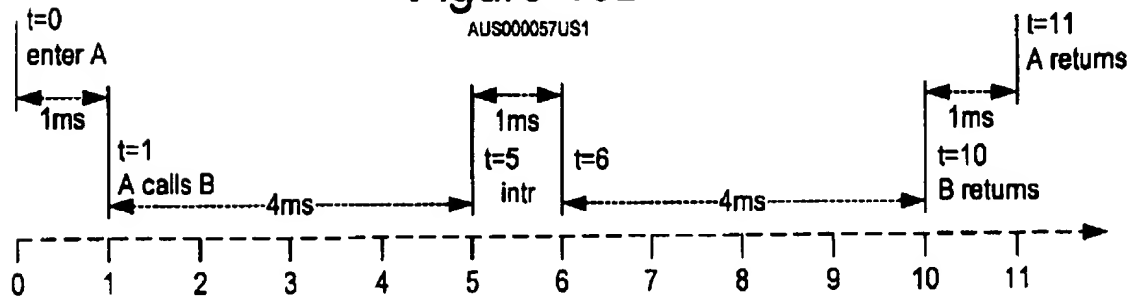
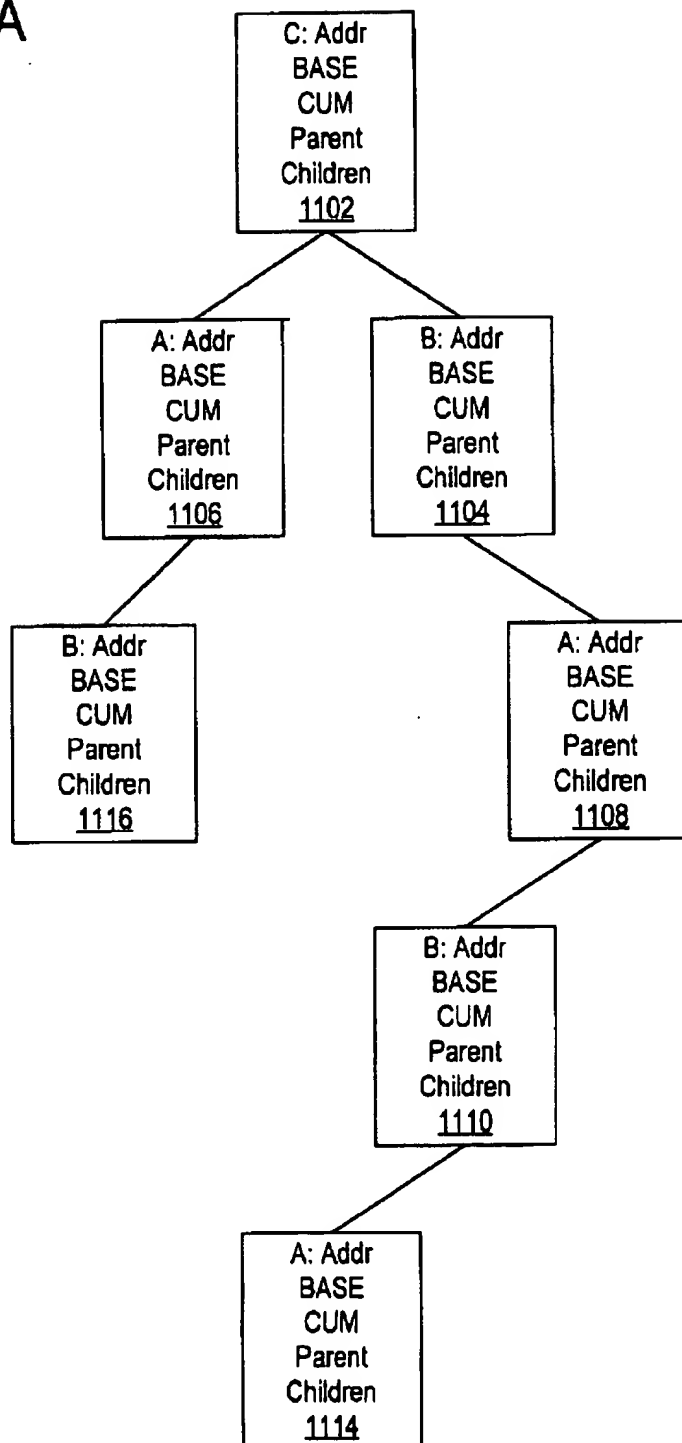


Figure 11A

AUS000057US1

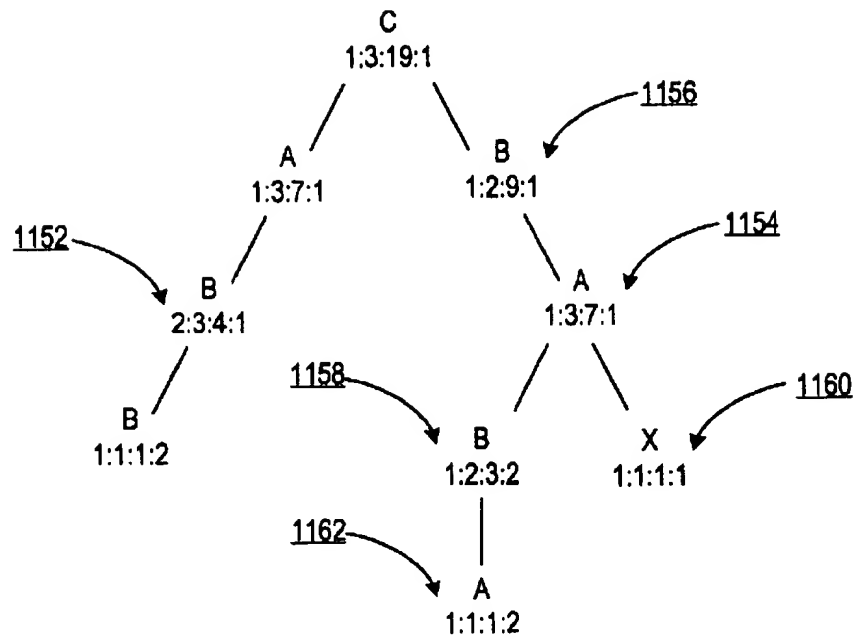
1100



005020-0321360

Figure 11B

AUS000057US1



005020-05E1560

AUS000057US1

<u>Level</u> <u>1230</u>	<u>RL</u> <u>1232</u>	<u>Calls</u> <u>1234</u>	<u>Base</u> <u>1236</u>	<u>Cum</u> <u>1238</u>	<u>Indent</u> <u>1240</u>
0	1	1	0	19	pt_piddid
1	1	1	3	19	- C
2	1	1	3	7	-- A
3	1	2	3	4	--- B
4	2	1	1	1	---- B
2	1	1	2	9	-- B
3	1	1	3	7	--- A
4	2	1	2	3	---- B
5	2	1	1	1	----- A
4	1	1	1	1	---- X

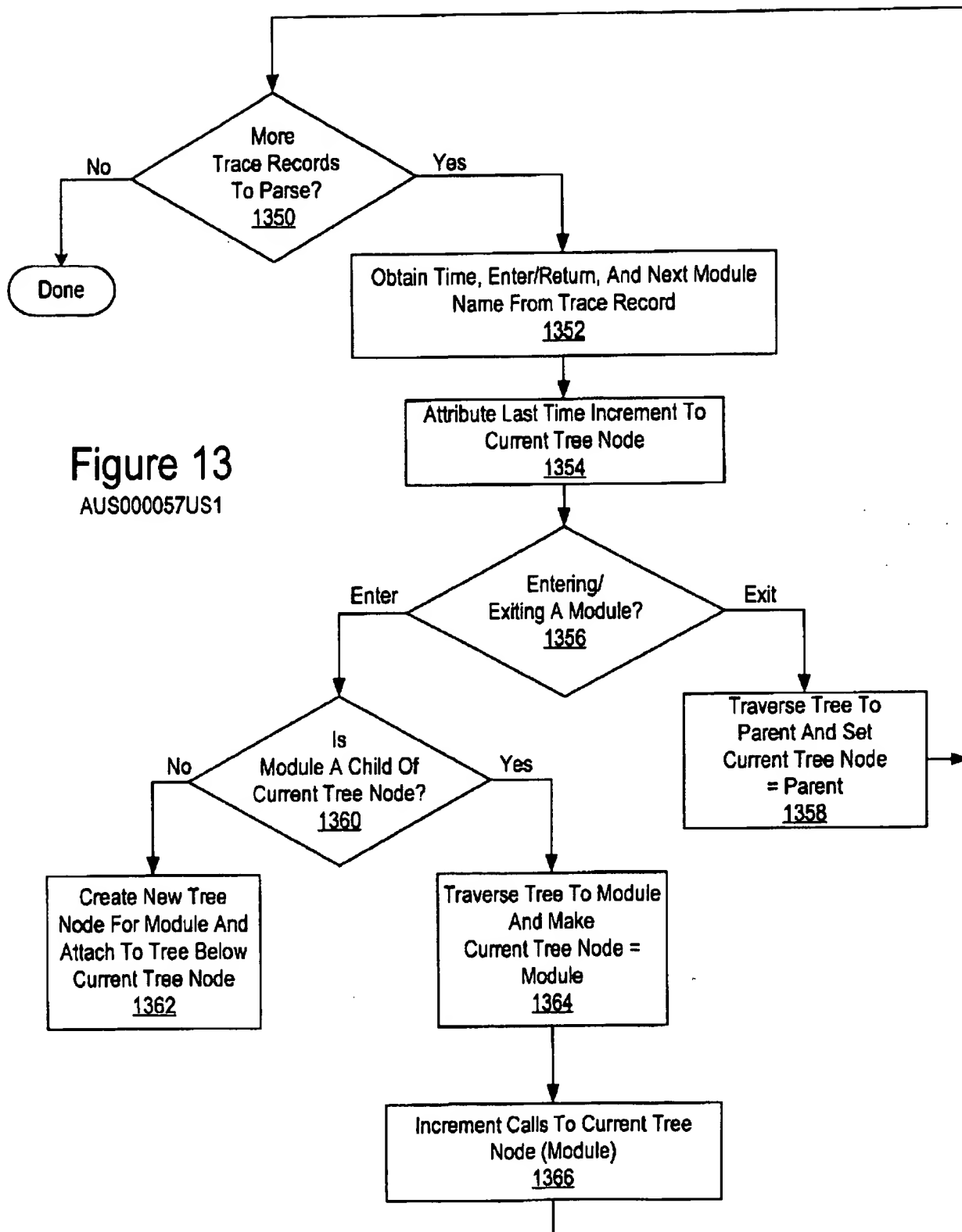
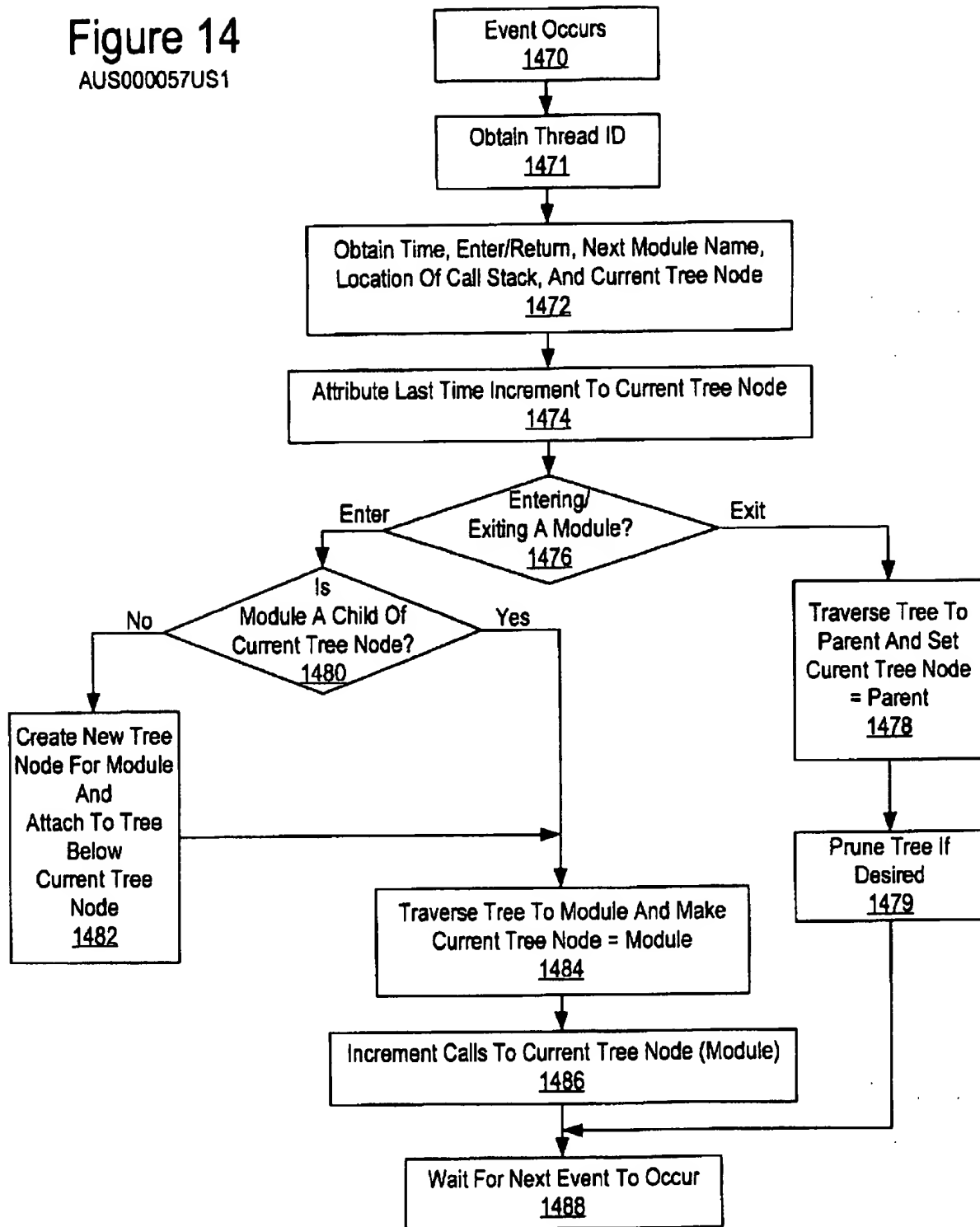


Figure 13
AUS000057US1

005020"05221920

Figure 14
AUS000057US1



005020-0361360

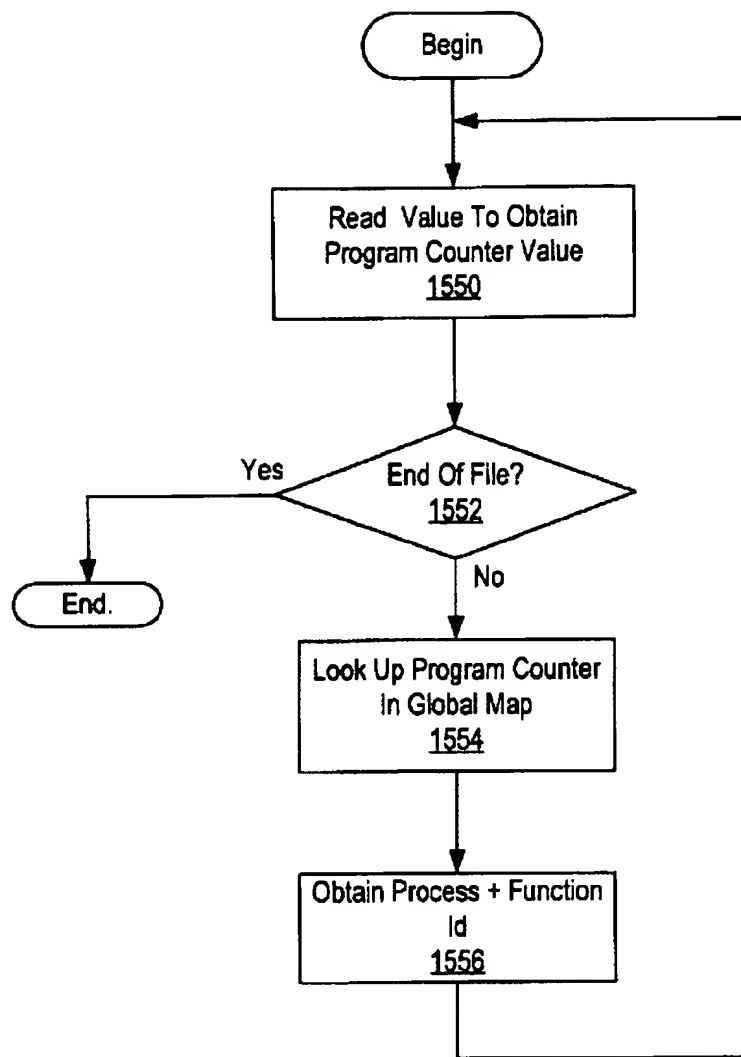


Figure 15B
AUS000057US1

005020"05127560

Figure 16

AUS000057US1

1600

Calls <u>1602</u>	Base <u>1604</u>	Cum <u>1606</u>	Name <u>1608</u>
1	0	19	pt_pit.tid
1	3	19	C
3	7	14	A
5	8	13	B
1	1	1	X

Figure 17

AUS000057US1

1700

ArcFlow Output

Base - Time/Instructions directly in function

Cum - Time/Instructions directly & indirestly in function

ArcFlow Invariants:

1) Sum(Parent(Calls)) = Self(Calls)

2) Sum(Parent(Base)) = Self(Base)

3) Sum(Parent(Cum)) = Self(Cum)

4) Sum(Child(Cum)) = Self(Cum) - Self(Base)

Source	Calls	Base	Cum	Function
Self	1	0	19 [0]	pt_pidtid
Child	1	3	19 C	
Parent	1	3	19	pt_pidtid
Self	1	3	19 [1]	C
Child	1	2	9 B	
Child	1	3	7 A	
Parent	1	3	7 C	
Parent	1	3	7 B	
rParent	1	1	1 B	
Self	3	7	17 [2]	A
			15	
Child	3	5	7 B	
Child	1	1	1 X	
Parent	2	3	4 A	
rParent	1	2	3 A	
Parent	1	2	9 C	
Self	5	8	13 [3]	B
			17	
Child	1	3	7 A	
rChild	1	1	1 A	
Child	1	1	1 B	
Parent	1	1	1 A	
Self	1	1	1 [4]	X

005020-0521560

Figure 18

AUS000057US1

Units :: Ticks
Total :: 342

1800

LvL	RL	Calls	Base	Cum	Indent	Name	
1	1	1	0	342	-	_Thread-21__(0xe0046618)	
2	1	3	0	342	--	J:nulltestScore()I	
3	1	2	0	272	---	J:nulltestMilliseconds(I)I	
4	1	29450	0	271	---	J:nullexecute()I	
5	1	271	0	271	---	stack_0x40	
6	1	271	0	271	---	F:ExecuteJava	1802
7	1	271	0	271	---	F:jit_invokeCompiledEntryMethod	
8	1	271	0	271	---	F:_jit_invokeentry	
9	1	271	0	271	---	F:JITInvokeCompiledEntryMethod_md	
10	1	271	0	271	---	J:nullrun()V	
11	2	271	0	271	---	J:nulltestScore()I	
12	2	271	0	271	---	J:nulltestMilliseconds(I)I	
13	2	271	268	271	---	J:nullexecute()I	1806
14	1	2	0	2	---	F:jperf_methodEntry	
15	1	2	0	2	---	F:SoftTracehook	
16	1	2	2	2	---	F:enable_interrupts	
14	1	1	1	1	---	F:jperf_methodExit	
4	1	1	0	1	---	stack_0x40	
5	1	1	0	1	---	F:ExecuteJava	1804
6	1	1	0	1	---	F:jit_invokeCompiledEntryMethod	
7	1	1	0	1	---	F:_jit_invokeentry	
8	1	1	0	1	---	F:JITInvokeCompiledEntryMethod_md	
9	1	1	0	1	---	J:nullrun()V	
10	2	1	0	1	---	J:nulltestScore()I	
11	2	1	0	1	---	J:nulltestMilliseconds(I)I	
12	1	1	0	1	---	J:nullexecute()I	1808
13	1	1	0	1	---	F:jperf_methodExit	
14	1	1	0	1	---	F:SoftTracehook	
15	1	1	1	1	---	F:enable_interrupts	
4	1	2	0	0	---	J:nullcleanUp()I	

Figure 20
AUS000057US1

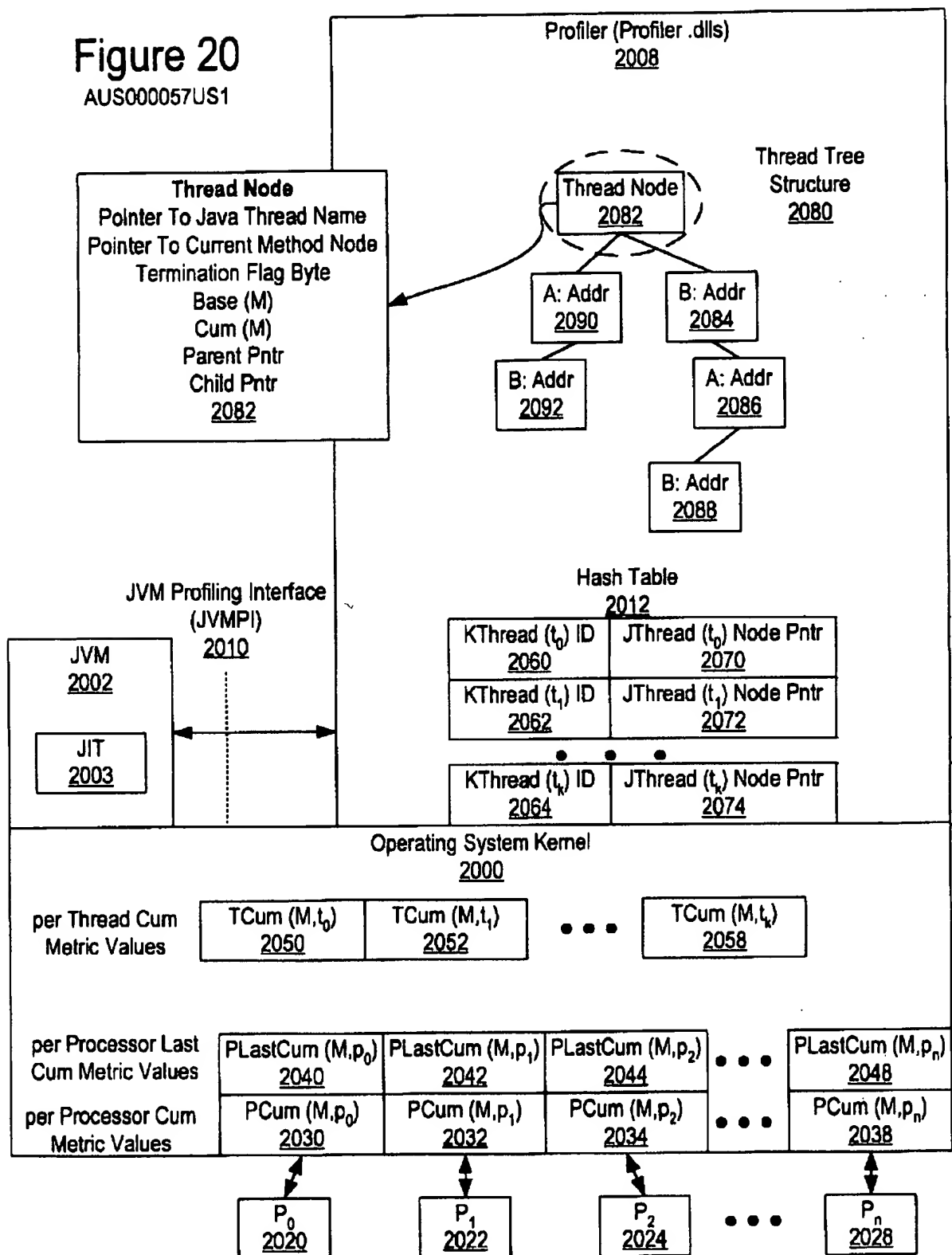


Figure 21A

AUS000057US1

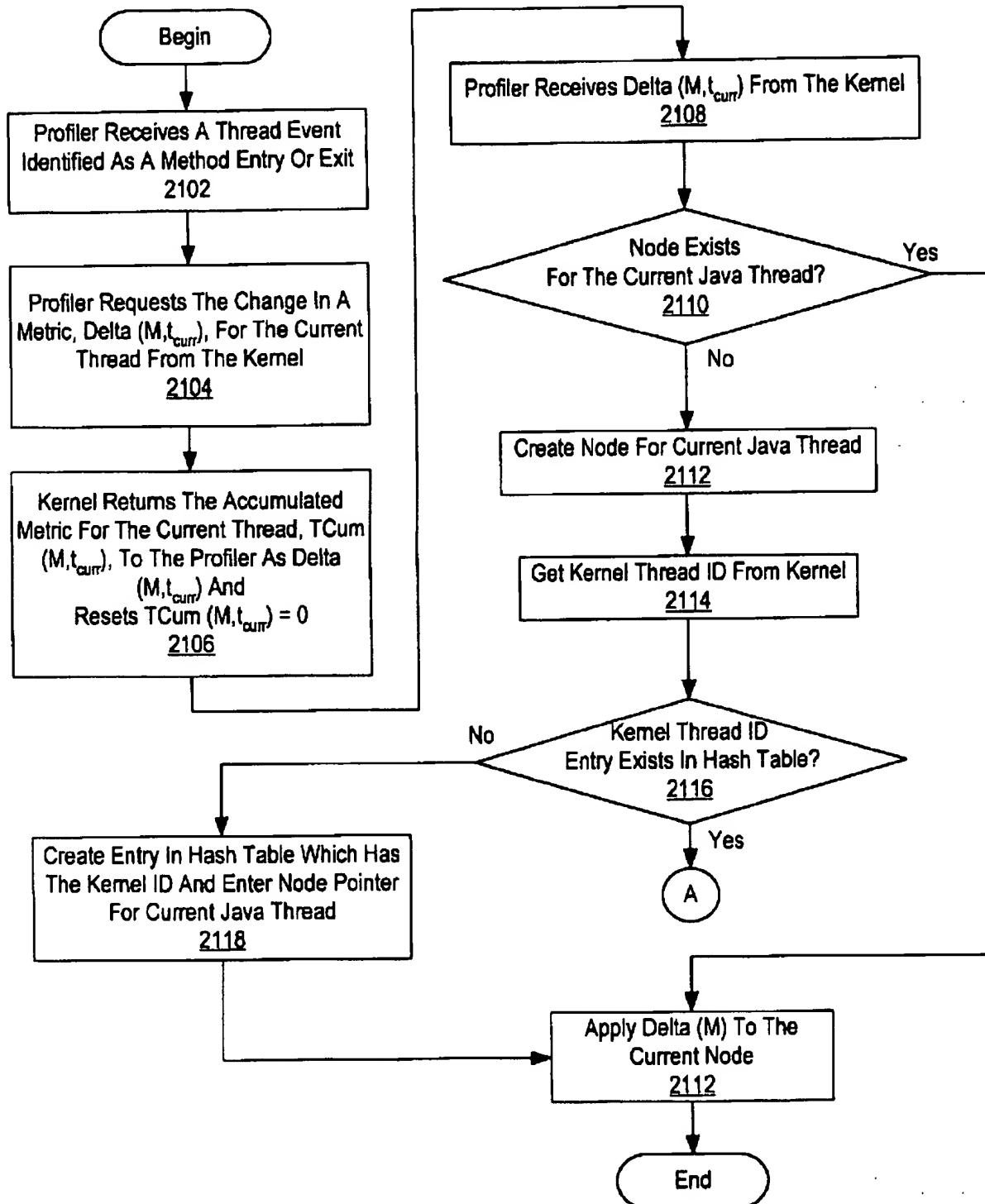


Figure 21B

AUS000057US1

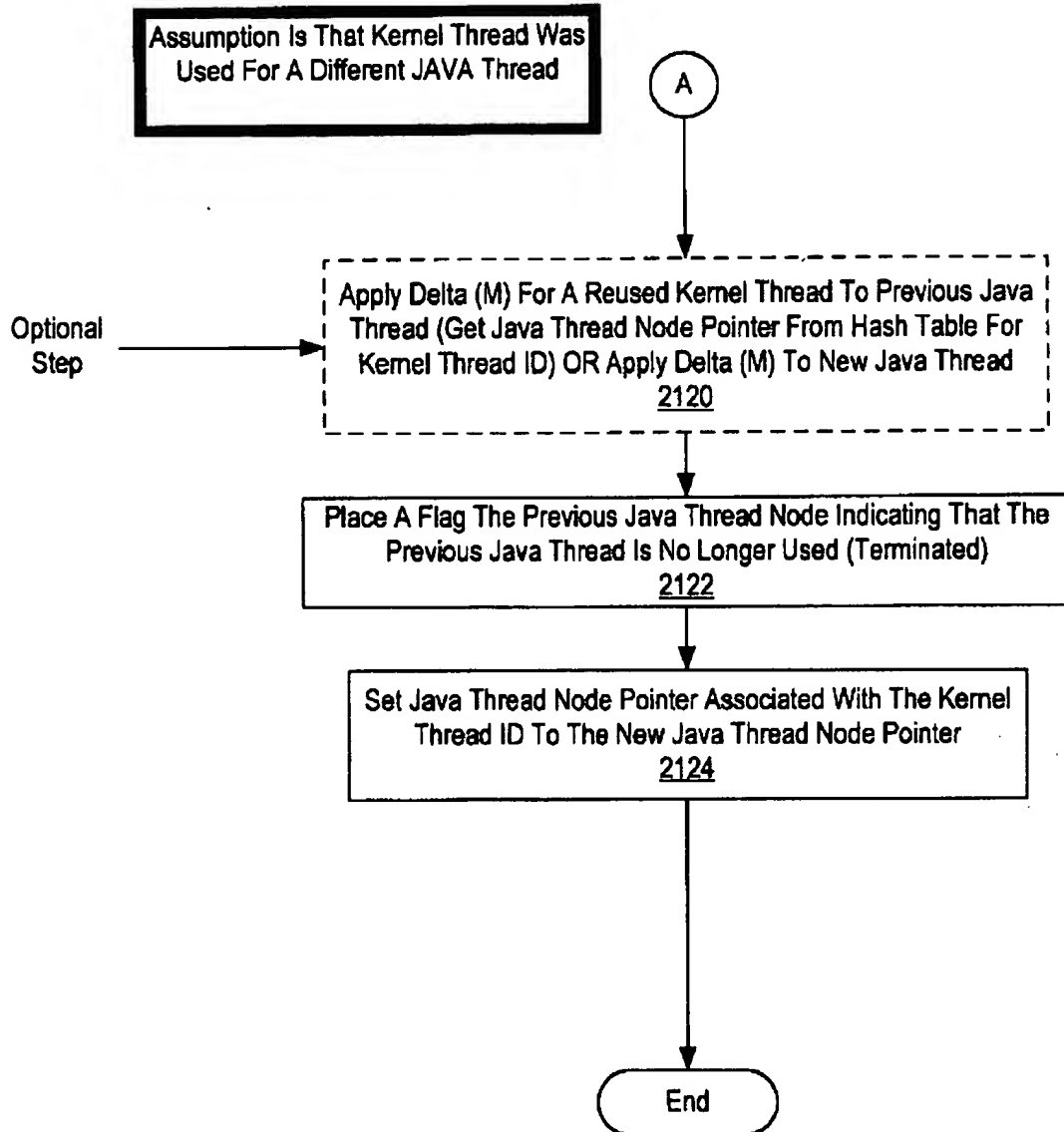


Figure 22

AUS000057US1

Java Thread Termination Notification Handling

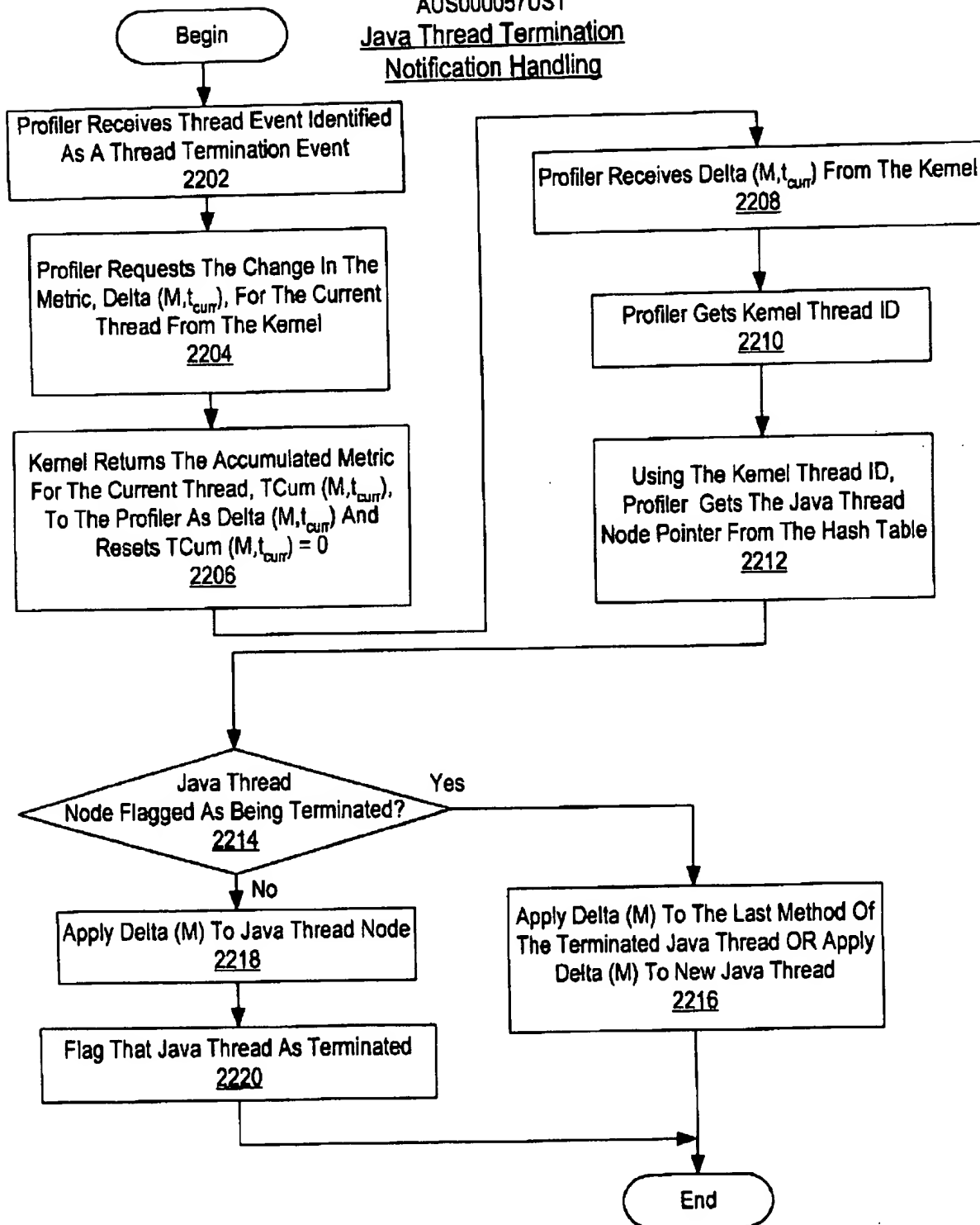
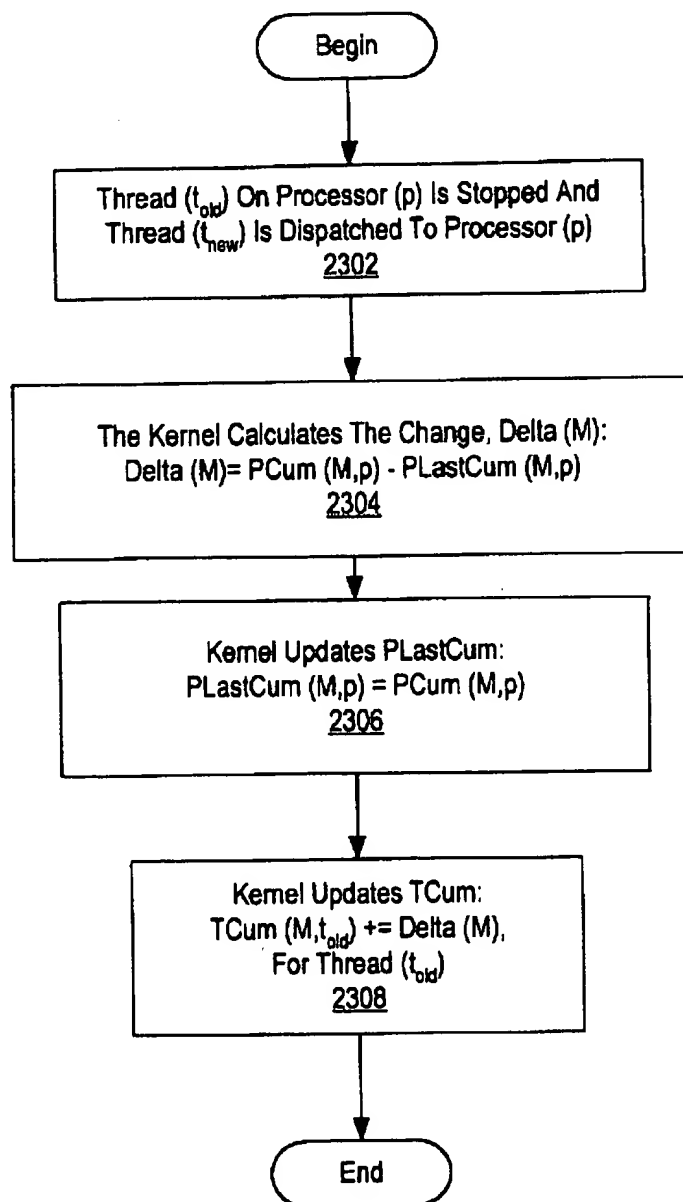


Figure 23

AUS000057US1

Process for the Kernel Updating Base Metric Response to a Thread Dispatch Event

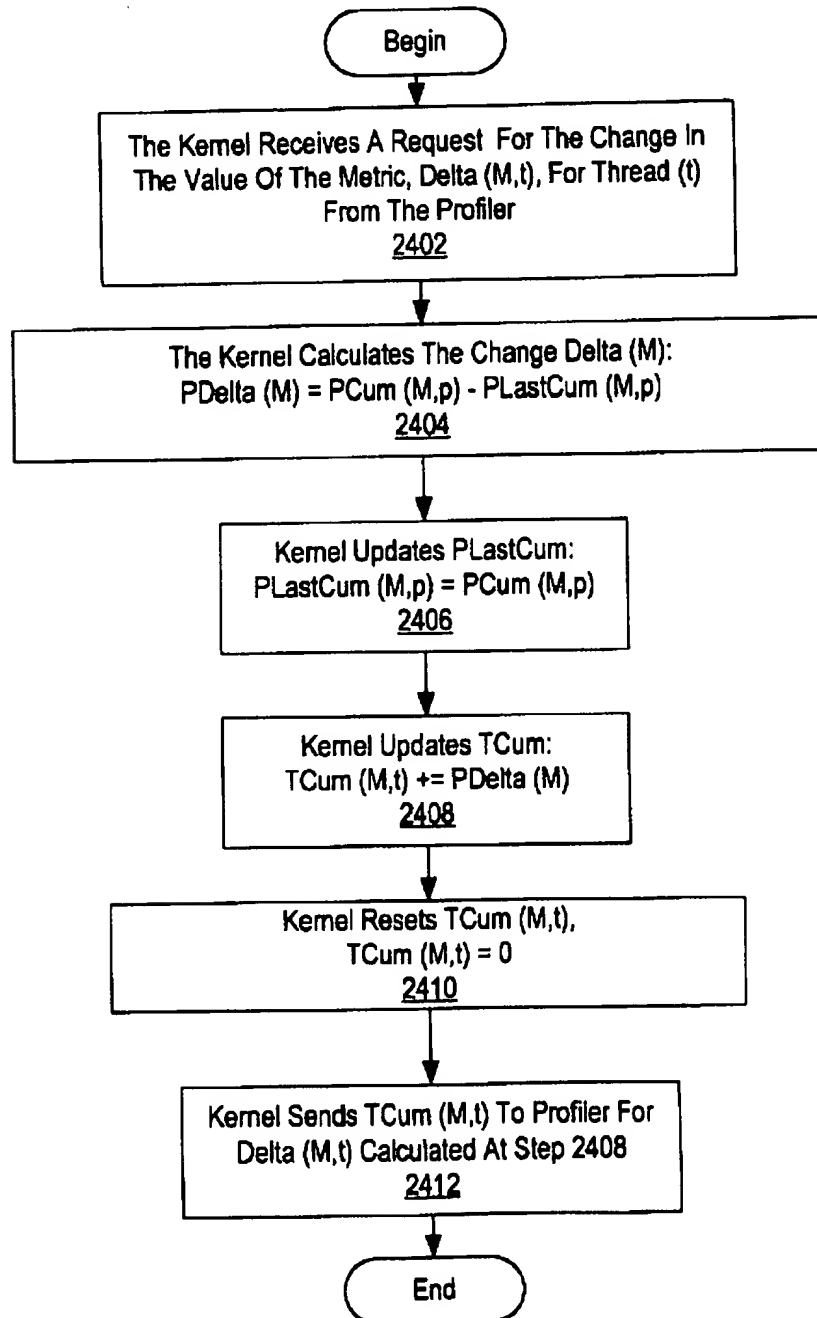


005020-0521560

Figure 24

AUS000057US1

Process for the Kernel Updating Base Metric Variable Values in Response to a Request from the Profiler (SMP Enabled)



009020-0561560

Figure 25

AUS000057US1

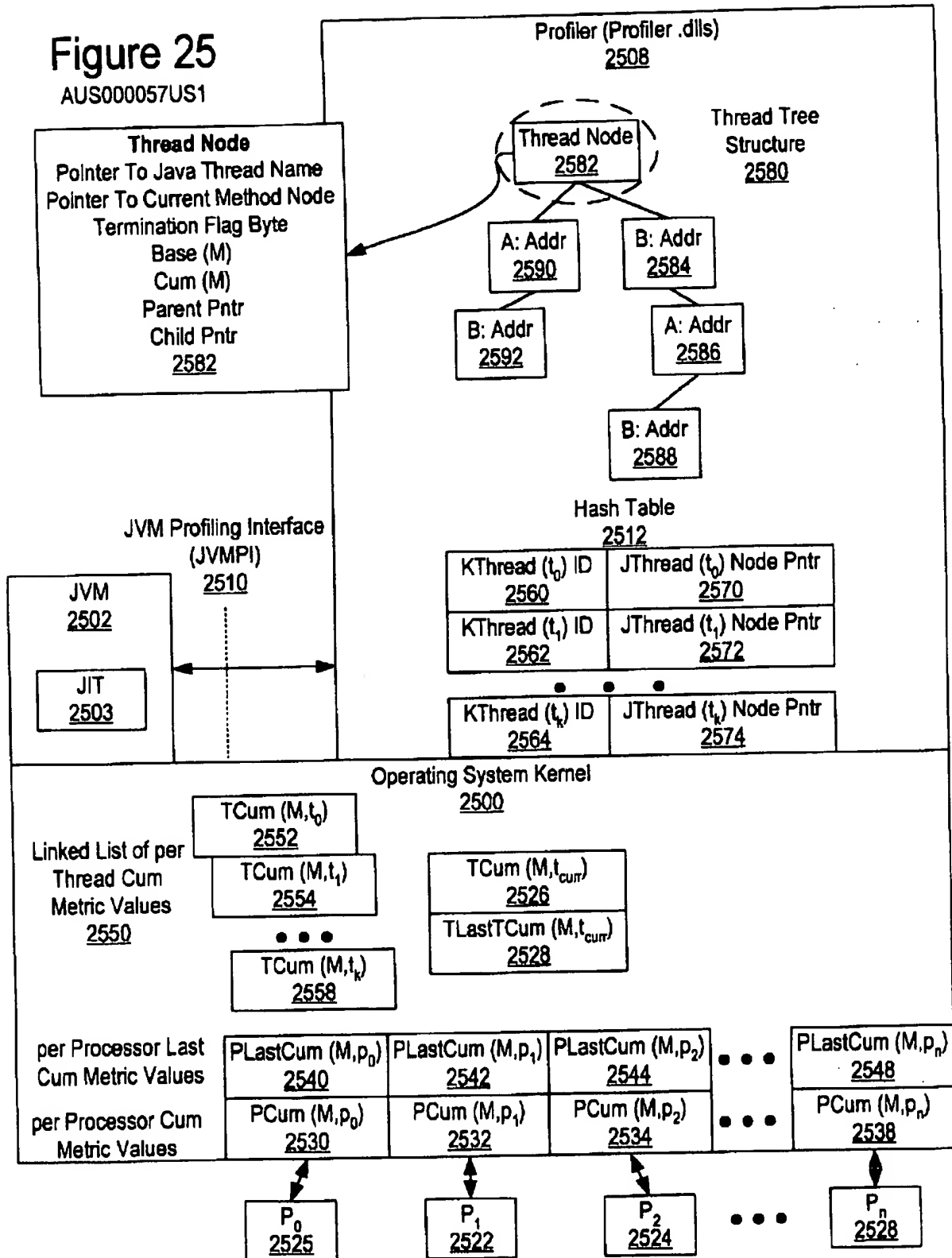


Figure 26

AUS000057US1

Kernel Using a Linked List to Calculate Delta (M)

Solution 2

Kernel Has A Linked List
For All Threads With
Nonzero Metric Values
Since The Last Request
From The Profiler

